**Solar System Models**

**Objective:**

Students will construct a model of our solar system.

**Possible content covered:**

* Identify the planets in Earth’s solar system and their position in relation to the Sun
* Describe the physical characteristics and locations of the planets

**Background Information:**

The color of each planet is determined by what they made up of, and in some instances, how their atmospheres absorb and reflect light from the Sun.

The four inner planets, which have solid rock surfaces, are mostly grey or reddish-brown in color due to elements such as iron found on the surface. However, the surface of Venus is difficult to detect from space, as a dense atmosphere and thick clouds of acid surround it. The sulphur present in the clouds reflects the light and gives Venus its noticeable yellow colouring. A similar principle applies when it comes to determining the colors of the four gas giants. Uranus and Neptune, for example, appear to us as blue because methane gas present in their atmospheres absorbs red light, enabling them to only reflect blue.

* **Mercury appears grey** because it is made up of rocks of the same color.
* **Venus is yellowish-white** because of the sulfuric acid clouds.
* **Mars is red and orange** based on the rusty rocks on its surface.
* **Jupiter and Saturn have ammonia clouds** which leads to a white or pale yellow.
* **Uranus appears light blue** due to methane clouds.

**Materials:**

* Plastic Ornaments
  + Clear, [plastic fillable ornaments](https://www.amazon.com/Kingrol-Fillable-Ornament-Projects-Christmas/dp/B07XP723QF/ref=sr_1_3?dchild=1&keywords=clear+plastic+ornaments&qid=1612204007&s=home-garden&sr=1-3) or 25 pcs [acrylic clear ornaments various sizes](https://www.amazon.com/gp/product/B07HT2TRGM/ref=ppx_yo_dt_b_asin_title_o06_s00?ie=UTF8&psc=1)
* [Mop and Glo](https://www.amazon.com/Mop-Glo-Multi-Surface-Floor-Cleaner/dp/B00NICZ570/ref=sr_1_5?dchild=1&keywords=mop+and+glo&qid=1612203718&s=home-garden&sr=1-5) multi-surface floor cleaner
* Very [fine glitter](https://www.amazon.com/gp/product/B078H8M7SK/ref=ppx_yo_dt_b_asin_title_o06_s00?ie=UTF8&psc=1) - Amazon

**Directions:**

1. Carefully pour about 1 teaspoon of Mop & Glo into the ornament. Amount will vary depending on the size of your plastic ornament. Do not shake the ornament. Air bubbles may form if shaken. Gently swirl the Mop and Glo around until the inside is completely coated. Pour out excess into a plastic bowl.
2. Using a funnel, pour small amounts of glitter into the ornament and slowly move the ornament around until the glitter has coated all of the sides. If you are trying to get a layered effect, add small amounts of each color one at a time.
3. Pour out excess glitter into a plastic bowl. This excess may be used to mix other colors for other ornaments.
4. Once the ornament has been completely covered with glitter, place it upside down in a solo cup to dry. After it has dried completely replace the ornament top.

**For More information :**

<https://solarsystem.nasa.gov/planets/jupiter/overview/>